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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/649,891

08/28/2003

Tsuyoshi Kaneko

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02/25/2005

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

STEVENSON, ANDRE C

ART UNIT

PAPER NUMBER

2812

DATE MAILED: 02/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/649,891

Applicant(s)

KANEKO ET AL.

Examiner

Andre' C. Stevenson

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-13 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


LYNNE A. GURLEY
PRIMARY PATENT EXAMINER
TC 2800, AU 2812

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/18/04, 01/20/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: See Continuation Sheet.

Continuation of Attachment(s) 6). Other: Information disclosure statement filed on 08/28/03.

Detailed Action

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7, 8, 9, 12 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Takeo (U.S. Pat. No.6,838,361 B2, Patented 01/04/05, PCT Filed 03/11/02).

Takeo shows, in figures 1-14 and corresponding text, with respect to claim #1, a method of manufacturing an optical component, comprising (**column 13, lines 54-67; column 14, lines 1-14**): forming a base member upon a substrate (**fig. 1d, item 12, 14, 16 & 30 & fig 3c, item 1, 12 & 14; column 5, lines 15-24; column 6, lines 1-10**); ejecting a plurality of droplets on to the top surface of the base member to form an optical member precursor (**column 6, lines 11-16**); and curing the optical member precursor to form an optical member (**column 9, lines 4-20**).

Pertaining to Claim #2, Takeo also shows a method of manufacturing an optical component, whereby the forming includes forming the base member with a material that transmits light of a prescribed wavelength (**column 10, lines 34-39; column 6, lines 22-33; column 15, lines 10-23**). Examiner notes that although Takeo fails to explicitly mention that the material is transmissive to light, he does teach the use of polyethylene and polystyrene, which are both

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transmissive to light. *Pertaining to claim #3*, Takeo shows, wherein the method of manufacturing an optical component includes the ejecting including ejecting using an inkjet method (**column 4, lines 4-16**). *Pertaining to claim 4*, Takeo shows, wherein the method of manufacturing an optical component, the curing including curing the optical member precursor by adding energy (**column 9, lines 4-20**). *Pertaining to claim #5*, Takeo shows ^{the} method of manufacturing an optical component, the forming including forming the base member so that an acute angle is formed between the top surface of the base member and a side surface in the base member, which contacts the top surface (**column 5, lines 66-67; column 6, lines 1-10**).

Pertaining to claim #7, Takeo shows, a method of manufacturing an optical component, further comprising adjusting the wettability of the top surface of the base member with respect to the droplet, before the ejecting (**column 5, lines 15-25**). *Pertaining to claim #8*, Takeo shows, the method of manufacturing an optical component, wherein the optical member is a micro lens, and the optical component is a micro lens substrate (**column 2, lines 50-53; column 1, lines 58-67; column 13, lines 54-67; column 10, lines 33-39; column 14, lines 37-49; column 15, lines 5-54**). Examiner notes that Takeo fails to show explicitly the term “micro lens” when referring to the optical members, as described by the present application. However, Takeo shows that the substrate (**item 1**) can be made of glass (**column 2, lines 50-53**), and that the first material being formed on the substrate (**item 12**) is made of polystyrene or polyethylene (**column 10, lines 33-39**), both of which are transmittant to light. These factors, along with the fact that Takeo is teaching the manufacturing of an electro-optic or an electroluminescent device, lead the Examiner to take the position that the substrate (**item 2**) and the first material (**item 12**) are indeed ^a micro lens. Also, Takeo teaches that the device may be part of a camera optics system

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(column 14, lines 37-49; column 15, lines 5-54). *Pertaining to claim #9*, Takeo shows, wherein a method of manufacturing an optical component, further comprising embedding the perimeter of the optical member using a sealing material (**column 11, lines 1-11**). *Pertaining to claim #12*, Takeo shows, the method of manufacturing a micro lens substrate, comprising: forming a base member upon a substrate (**fig. 1d, item 12, 14, 16 & 30 & fig 3c, item 1, 12 & 14; column 5, lines 15-24; column 6, lines 1-10**), ejecting a droplet on to the top surface of the base member to form a lens precursor (**column 6, lines 11-16**); and curing the lens precursor to form a lens (**column 9, lines 4-20**). Finally, *pertaining to claim #13*, Takeo shows, method of manufacturing a micro lens substrate according to claim 12, the forming including forming the base member with a material that transmits light of a prescribed wavelength (**column 10, lines 34-39**).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeo (U.S. Pat. No. 6,838,361 B2, Patented 01/04/05, PCT Filed 03/11/02) as applied to claims 1-5⁷⁻⁹ and 1¹

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JK
~~12-13~~

~~7-9~~ above, and in view of Banno et al. (U.S. Pat. No.6,761,925 B2, Patented 07/13/04, Filed 04/09/99).

Takeo shows, *Pertaining to claim #10*, wherein the method of manufacturing an optical component, comprising: forming a base member upon a substrate (**fig. 1d, item 12, 14, 16 & 30 & fig 3c, item 1, 12 & 14; column 5, lines 15-24; column 6, lines 1-10**), ejecting a droplet on to the top surface of the base member to form an optical member precursor (**column 6, lines 11-16**), curing the optical member precursor to form an optical member (**column 9, lines 4-20**). *Pertaining to claim #11*, Takeo shows, a method of manufacturing an optical component, the forming including forming the base member with a material that transmits light of a prescribed wavelength (**column 10, lines 34-39**).

Takeo fails to show, *pertaining to claim #10*, removing the optical member from the top surface of the base member.

Banno teaches, *pertaining to claim #10*, in a similar manufacturing method, removing an optical member from the top surface of a base member (**column 13, lines 20-28**).

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to implement the art of removing the optical member from the top surface of the base member, in the method of Takeo, as taught by Banno, with the motivation that if an amount of droplet is placed in an unwanted position, or an excessive amount is deposited in an

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unwanted area, it can be removed without destroying the work of the chip that has already been accomplished.

Allowable Subject Matter

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim #6 allowable subject matter pending further search.

- ✓ Forming including forming the upper part of the base member in an inverse tapered shape.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure; Speakman (U.S. Pat. No. 6,402,403), Speakman (U.S. Pat. No. 6,713,389 B2), Banno et al. (U.S. Pat. No. 6,060,113).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre' Stevenson whose telephone number is (571) 272 1683. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael S. Lebentritt, can be reached on (571) 272 1873. The fax phone number for the organization where this application or proceeding is assigned is (703) 308 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956. Also, the proceeding numbers can be used to fax information through the Right Fax system;

(703) 872-9306

Andre' Stevenson


LYNNE A. GURLEY
PRIMARY PATENT EXAMINER
TC 2800, AU 2812